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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,399	11/28/2001	Koji Sasada	9683/97	2361

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EXAMINER

GELIN, JEAN ALLAND

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/997,399

Applicant(s)

SASADA ET AL.

Examiner

Jean A Gelin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9, 14-17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kauppi (US 5,832,381).

Regarding claim 1, Kauppi teaches a location registration control method, comprising the steps of: broadcasting by a mobile communication network in a plurality of types of location areas, area identification information on said plurality of types of location areas, with each location area being included in one of a plurality of types of location area groups overlaying a communication service area, and each location area group being obtained by sectioning said communication service area into location areas by using one of a plurality of types of section patterns (i.e., broadcasting location area identifier, col. 1, lines 20-45, col. 2, lines 9-29); receiving at a communication terminal located within said communication service area, said area identification information on said plurality of types of location areas corresponding to a location of said terminal (i.e., col. 1, lines 25-45); selecting at said communication terminal on the basis of said received area identification information on said plurality of types of location areas, a location area identification corresponding to a section pattern predetermined for use with said communication terminal (col. 2, lines 34-36); and transmitting from said

communication terminal to said mobile communication network, when a change in location of said communication terminal is indicated by a change in said location area identification selected in said terminal, a request for registration of said location change of said communication terminal in said network (i.e., updating location when the location is changed, col. 2, lines 36-65).

As per claim 2, Kauppi teaches wherein each of said plurality of types of section patterns is used to section said communication service area such that the size of a location area differs depending on the type of section pattern to which it belongs (col. 2, lines 6-20, col. 3, lines 9-35).

As per claim 3, Kauppi teaches wherein each of said plurality of types of section patterns is used to section said communication service area such that the shape of a location area differs depending on the type of section pattern to which it belongs (col. 2, lines 6-20, col. 3, lines 9-35).

Regarding claim 4, Kauppi teaches wherein: said communication service area of said mobile communication network consists of a plurality of radio cells (col. 4, lines 45-66); each one of said plurality of types of section patterns is used to section said communication service area consisting of said plurality of radio cells into a plurality of location areas, each of which comprises one or a plurality of radio cells (col. 4, line 60 to col. 5, line 60); and each one of said one or a plurality of radio cells is covered by one or a plurality of base stations performing radio communication with communication terminals (col. 4, line 60 to col. 6, line 32).

Regarding claim 5, Kauppi teaches wherein said step of broadcasting area identification information includes broadcasting, from said one or plurality of base stations and through a control channel, area identification information on said plurality of types of location areas (col. 4, lines 1-22).

Regarding claim 6, Kauppi teaches notifying, by said mobile communication network, said communication terminal of information specifying one of said plurality of types of section patterns (i.e., broadcasting identification information which includes location area identifier and the communication terminal receives location area identifier information via a paging channel correspond to the step of notifying, col. 2, lines 9-37).

Regarding claims 7-9, Kauppi teaches wherein said section pattern predetermined for use with said communication terminal is decided by a user of a said communication terminal and a service operator managing said mobile communication network on the basis of a projected usage pattern of said communication terminal (col. 5, line 56 to col. 6, line 65).

Regarding claims 14-17, and 19, Kauppi teaches mobile communication network, comprising: storage means for storing data showing correspondence between a plurality of grouped location areas and radio cells belonging to each location area, each group being obtained by sectioning a communication service area into location areas by using one of a plurality of types of section patterns (i.e., a storage means for storing location area identifiers for comparison, col. 6, lines 13-33); broadcasting means for broadcasting, in a plurality of types of location areas, area identification information on said plurality of types of location areas (col. 6, lines 5-33); receiving means for receiving

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a signal requesting location registration from a communication terminal (col. 6, lines 5-12); and registering means for registering in a location register, in the case of receiving a signal requesting location registration by said receiving means, a location area identification where said communication terminal is located as location information of said communication terminal, said location area identification being included in said signal requesting said location registration (col. 6, lines 5-41).

Regarding claim 20, Kauppi teaches wherein said communication terminal is a portable phone (i.e., MS, col. 6, line 5)).

3. Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Keshavachar (US 6,101,388).

Regarding claim 11, Keshavachar teaches a location registration control method, comprising the steps of: storing, at a communication terminal, data showing correspondence between a plurality of grouped location areas and radio cells belonging to each location area, each group being obtained by sectioning a communication service area into location areas by using one of a plurality of types of section patterns (i.e., mobile stores LAI table, col. 3, lines 40-56, col. 6, lines 21-56); broadcasting, by said mobile communication network, in each of radio cells constituting said communication service area, cell identification information on said each one of radio cells (col. 3, line 64 to col. 4, line 16); receiving, at said communication terminal located in said communication service area, cell identification information on a radio cell where said communication terminal is presently located (i.e., receiving identification

information to update LAI, col. 7, lines 11-16); selecting, at said communication terminal as area identification information of a location area designating its own location on the basis of said received cell identification information and said stored data, a local area identification corresponding to a section pattern predetermined for use with the communication terminal (col. 3, line 65 to col. 4, line 16); and transmitting from said communication terminal to said mobile communication network, when a change in location of said communication terminal is indicated by a change in said location area identification selected in said terminal, a request for registration of said location change of said communication terminal in said network (col. 6, line 41 to col. 7, line 20).

Regarding claim 12, Keshavachar teaches wherein said data showing said correspondence includes area identification information only on a location area group corresponding to a section pattern predetermined for use with said communication terminal (col. 3, line 64 to col. 4, line 16).

Regarding claim 13, Keshavachar teaches wherein said data showing said correspondence is transmitted from said mobile communication network to said communication terminal (col. 3, line 64 to col. 4, line 16).

Claim Rejections - 35 USC § 103

4. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kauppi in view of Alperovich (WO 00 03557A).

Regarding to claims 10 and 18, Kauppi teaches all the limitations above except recording on a plurality of types of LA, at said communication terminal, the current time at which said area identification information is received; and selecting a location area

identification includes obtaining at said communication terminal information designating a section pattern corresponding to said recorded current time, on the basis of said information designating section patterns, so as to select a location area identification corresponding to said information designating a section pattern.

However, the preceding limitation is known in the art of communications. Alperovich teaches maintaining statistical data which can include the number of pages to a specific MS over a predefined period of time, the number of location update attempts, and determining the location area to page the MS based on a threshold ratio of location updates to the paging activity (page 5, line 24 to page 6, line 24). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to implement the technique of Alperovich within the system of Kauppi in order to determine whether the MS should be paged within the entire LA or within the sub-LA or whether the MS should perform location updates between LA or between sub-LA.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A Gelin whose telephone number is (703) 305-4847. The examiner can normally be reached on 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth can be reached on (703) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JEAN GELIN
PRIMARY EXAMINER

JGelin
September 11, 2004

Jean Allard Gelin